Claims

What is claimed is:

1. A method of scheduling a plurality of employees in a health care environment, wherein at least two patients receive treatment during a predetermined time period, said scheduling method comprising:

for each patient, evaluating patient care requirements, wherein the patient care requirements correspond to actual employee time requirements necessary to satisfy the patient care requirements;

in response to the patient care requirement evaluation, adjusting scheduling time of at least one patient to distribute the corresponding employee time requirements throughout a predetermined time period; and

automatically scheduling employees in response to the distributed employee time requirements.

2. A method as defined in claim 1 wherein the act of automatically scheduling the employees comprises:

defining a predetermined number of job-types, wherein each job-type has an associated skill level;

scheduling job-types to accommodate the patient requirements; and

associating employees with the scheduled job-types.

3. A method as defined in claim 2 wherein the predetermined time period is a day, the method further comprising:

dividing the day into intervals; and

in evaluating the patient care requirements, determining the patient care requirements on a per-interval basis.

4. A method as defined in claim 3 wherein the patient care requirements are averaged over more than one interval.

5. A method as defined in 2 further comprising:

defining acceptable shift lengths; and

scheduling job types based on acceptable shift lengths.

6. A method as defined in claim 2 wherein each employee has a predetermined patient care capability and wherein the method further comprises scheduling employees in relation to patient care capability.

7. A method as defined in claim 6 wherein the patient care capability relates to indirect and direct patient care activities.

8. A method as defined in claim 7 wherein each employee further has a predetermined non-patient care capability relating to performing non-patient care activities, and wherein the method further comprises:

calculating a staff efficiency valued based on scheduled activities, wherein the activities relate to patient care and non-patient care activities and wherein the efficiency evaluates hours of direct patient care required per treatment activity.

9. A method as defined in claim 2 further comprising:

dividing the predetermined time into intervals; and

displaying a plurality of patient schedules in relation to time to provide a visual indication of the patient care requirements for each interval.

10. A method as defined in claim 9 further comprising calculating patient requirement values related to required employee based on the patient care requirements for a plurality of intervals and displaying the calculated values.

11. A method as defined in claim 10 further comprising displaying employee shift information in relation to time to provide a visual indication of scheduled employee information in relation to scheduled patient information.

12. A method as defined in claim 11 further comprising:

calculating a total value of employee time for each interval;

displaying the calculated employee values in a grid form;

comparing patient requirement values and employee values for each interval to determine efficiency.

13. A computer program product readable by a computer and encoding instructions executing the method defined in claim 12.

14. A method as defined in claim 1 wherein the act of adjusting the scheduling times of the patients comprises automatically staggering the start time of at least two patients to

allow one employee to substantially service the needs of the at least two patients based on a predetermined stagger value.

15. A method as defined in claim 14 further comprises:

entering an idle time; and

automatically scheduling subsequent patients based on the idle time.

16. A method as defined in claim 1 wherein the act of automatically scheduling the employees comprises:

generating an ideal staff model, based on job types;

using the ideal staff model, generating an ideal staff schedule; and

displaying the ideal staff model.

18. A method as defined in claim 17 further comprising associating employees with the staff model to finalize the employee schedule.

19. A method as defined in claim 18 further comprising:

defining a set of drivers to define the rules in creating the ideal staff model.

20. A method as defined in claim 19 wherein the drivers comprise:

a nurse to non-nurse employee ratio;

a direct patient care percentage value for nurses; and

a direct patient care percentage value for non-nurses.

21. A method as defined in claim 20 further comprising:

calculating an efficiency value for a schedule wherein the efficiency value accommodates for intermittent patient acuity.

22. A computer program product readable by a computer and encoding instructions executing the method defined in claim 1.

23. A computer program product readable by a computer and encoding instructions executing the method defined in claim 15.

24. A computer program product readable by a computer and encoding instructions executing the method defined in claim 21.

25. A method of scheduling employees in a health care environment comprising:

compiling a plurality of patient profiles, each profile associated with a different patient, and wherein each profile comprises information related to the direct patient care needs of the associated patient;

compiling a plurality of employee profiles, each profile associated with a different employee and wherein each profile comprises information related to the patient care capability of the associated employee;

calculating scheduling efficiency information relating to a generated schedule of patients and employees based on the patient profiles and employee profiles; and

automatically adjusting the schedule to generate a more efficient schedule.

26. A method as defined in claim 25 wherein the act of automatically adjusting the schedule comprises:

entering a stagger time;

entering an idle time; and

automatically shifting the patient schedules based on the stagger time and the idle time.

27. A method as defined in claim 26 further comprising:

automatically adjusting the employee schedules in response to the automatic shifting of the patient schedules.

28. A method as defined in claim 27, wherein the act of automatically shifting the patient schedules further comprises evaluating the patient profiles to resolve conflicts.

29. A method as defined in claim 28 wherein the act of automatically adjusting employee schedules further comprises evaluating the employee profiles to resolve conflicts.

30. A system for scheduling employees in a health care environment comprising:

a memory store for storing patient information related to the needs of a plurality of patients, resource information and employee information related to patient care capability of a plurality of patients;

a scheduling module that schedules patients and employees according to patient needs;

an optimization module for adjusting a schedule to optimize efficiency; and

a display unit for displaying the scheduled patient information in combination with scheduled employee information, the display providing efficiency information.

31. A system as defined in claim 30 wherein the scheduling module further calculates the needs of each patient based on a per-interval basis and for calculating the employee capability on a per interval basis.

32. A system as defined in claim 31 wherein the calculated needs of the employees and patients are displayed on the display unit.

33. A system as defined in claim 32 wherein scheduling module further calculates a comparison value related to patient requirements and employee capabilities for each interval, said comparison values displayed on the display unit.

34. A system as defined in claim 32 wherein the calculated values are automatically updated and displayed following a modification to the patient schedule information.

35. A system as defined in claim 33 wherein the calculated values are automatically updated and displayed following a modification to the employee schedule information.

36. A system as defined in claim 32 wherein optimization module compensates for intermittent acuity in determining an ideal staffing model, wherein the intermittent acuity relates to staff idle time when no unplanned patient requirements occur.

37. A system as defined in claim 32 further comprising a calculation module that calculates total patient treatment times, hours per treatment time and determines the efficiency of a schedule based on the hours per treatment time.

38. A graphical user interface for a computer system, the graphical user interface having a display module for displaying information; said graphical user interface comprising:

a patient schedule portion, the patient schedule portion logically divided into intervals and displaying patient schedule information related to the intervals;

an employee schedule portion logically divided into intervals, wherein the intervals for the patient schedule portion correspond to the intervals for the employee information portion; and

a calculation display area for displaying calculated values within each interval, the calculated values relating to patient care requirements, the display area graphically

depicting peaks related in relative increases in patient requirements, for each interval such that the calculation display area provides efficiency information.

39. A graphical user interface as defined in claim 38 wherein the calculated values are automatically updated when the displayed information in either the patient schedule portion or the employee schedule portion is modified.